Nortel WLAN Handsets 6120 and 6140 Installation and Configuration Addendum

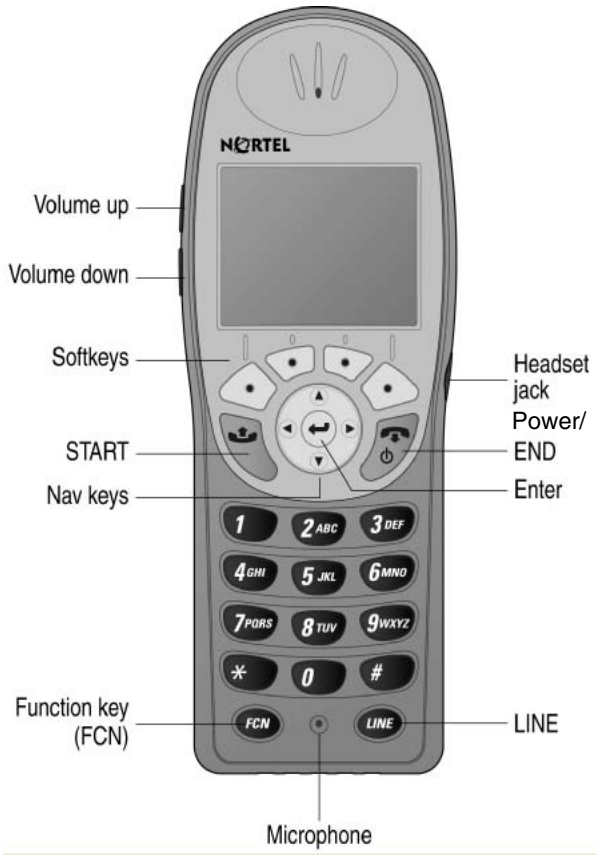
BCM

Handset 6120 and 6140 overview

This document is an update to the *WLAN IP Telephony Installation and Configuration Guide* (NN40010-303).

The WLAN Handsets 6120 and 6140 operate with the Business Communication Manager (BCM) and are fully functional handsets specifically designed for the busy office environment. Your Nortel WLAN Handsets 6120 and 6140 uses radio wave technology to send and receive voice and data transmissions. It is designed to operate much like a cell phone. However, the Handsets use the private communication system installed in your facility and will not operate outside the area covered by this system.

WLAN Handsets 6120 and 6140



WLAN Handset 6120

WLAN Handset 6140

WLAN Handsets 6120/6140 and the WLAN Handset 2210

The WLAN Handsets 6120 and 6140 function the same as the WLAN Handset 2210 except for the following differences. For information on the installation and configuration of the WLAN Handsets 6120 and 6140, see the WLAN Handset 2210 information in the *WLAN IP Telephony Installation and Configuration Guide* (NN40010-303).

Table 1 WLAN Handsets 6120/6140 and WLAN Handset 2210 comparison matrix

WLAN Handsets 6120 and 6140	WLAN Handset 2210
Navigation buttons and Enter (Nav keys) located below the soft keys are used to navigate through menu options.	Left arrow and Star button enable scrolling to the left for menu navigation. Right arrow and Pound button enable scrolling to the right for menu navigation. Menu key displays the full description of the Display soft keys abbreviations and accesses the handset features.
Four buttons control four soft keys	Two rocker buttons control four soft keys

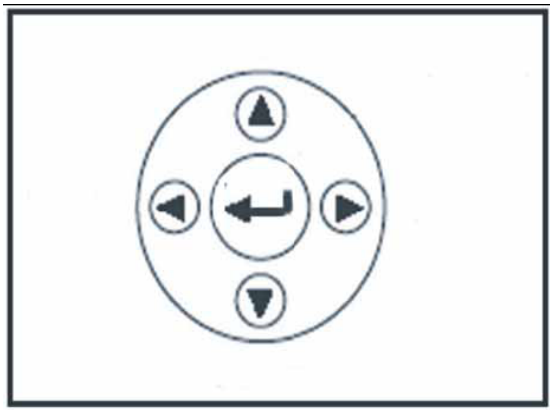
Opening and using the Admin Menu on the WLAN Handsets 6120/6140

The Admin menu contains configuration options that are stored locally on each wireless handset. Every wireless handset is independent. If the default settings are not desired, the Admin options must be configured in each separate wireless handset that requires different settings.

1. With the wireless handset powered OFF, press and hold the **Start** key.
2. While you press the **Start** key, press the **End** key.
3. Release the **End** key, and then release the **Start** key.
   The first option on the Admin menu appears.

   If an Admin password is configured, you must enter the password to open the Admin menu. The default password is 123456. If no password is configured, the display proceeds directly into the Admin menu.
4. Press the navigation keys and the soft keys on the wireless handset to scroll through the menu options. Figure 1 Navigation keys illustrates the navigation keys.

Figure 1 Navigation keys



An asterisk (*) beside an option indicates that it is selected.

- Press **Nav** up or down, to display the previous and next menu options.
- Press **Enter** to select a menu option or item.
- Press **Nav <** to backspace when editing an entry.
- Press **Back** soft key to return to the previous menu level.
- Press the **Clr** soft key to delete an entry and then enter new data.

- Press the **Del** soft key to cancel the entry and return to the previous menu level.
- Press the **Exit** soft key to exit the menus.

Making an alphanumeric entry

1. Enter a number by pressing any keypad button.
2. Press the number key again to display the first letter associated with that key.
3. Press the **CAPS/caps** soft key to toggle the case.
4. Press the key again to scroll through the letters associated with that key.
   Example: if you press 2 repeatedly, 2, A, B, C (CAPS on) or 2,a, b, c (CAPS off) appear on the display.

   Use the following keys to enter nonnumeric characters or other characters that are not represented on the keypad.

Table 2 Keys

To enter	Press
. - _! # $ % & ‘ ( ) , : ; \ = @ ~ *	*
Space	#

5. After the correct entry appears, press **Nav >** to move to the next character, and repeat for each digit and letter of the entry.
6. Press the **Save** soft key to save the entry and return to the menu.
   OR
   Press the **Exit** soft key to abort and return to the menu without saving any changes.

Admin menu options

Table 3 Admin menu options for the WLAN Handsets 6120/6140 lists the Admin menu options for the WLAN Handsets 6120/6140. Detailed descriptions of each item follow the table. An asterisk (*) beside a setting indicates the default setting.

Table 3 Admin menu options

Admin menu option	2nd level	3rd level	4th level	5th level
Phone config	Language	*English Française Deutsch Español Português Norsk		
	Telephony Protocol	Type 030*Type 032		
	Push-to-talk	PTT Enable/Disable		
		Allowed Channels	*Channel 1 *Channel 2 *** *Channel 24	
		Name Channels	*Channel 1 *Channel 2 *** *Channel 24	
		Priority Channel On/Off	Name Channel	
	Time Zone	[list] *GMT		
	Daylight Saving	*DST No Adjust DST Auto <USA> DST Auto <Euro> DST Auto <AUS>		
	Protected Spd Dial	Enter Number	Enter number	Assign speed-dial
	Password [Disable/Enable]			
	Change Password			
	Set Terminal Type [2004/3rd Party]			
	Startup Keylock			
	Speakerphone [Disable/Enable]			
	OAI [Disable/Enable]			
	Location Services	On * Off	Set transmission interval	1, 5, 10
			IP address	*___.___.___.___

Table 3 Admin menu options

Admin menu option	2nd level	3rd level	4th level	5th level
Network config	IP addresses	*Use DHCP	Full DHCP	
			Partial DHCP	Server1 IP Address Server1 Port Server2 IP Address Server2 Port
		Static IP	Phone IP	
			Default Gateway	
			TFTP Server IP	
			Subnet Mask	
			Syslog Server IP	
			Time Server IP	
			SVP IP	
			Call Server Info	Server1 IP Address Server1 Port Server2 IP Address Server2 Port
			OAI Sever IP	
	SSID	[Enter]		
	Security	*None		
		WEP	Authentication	Open System Shared Key
			WEP On/*Off	*WEP Off WEP On
			Key Information	Default Key Key Length Key 1-4
			Rotation Secret	
		WPA2-PSK	Passphrase Pre-Shared Key	
		Cisco FSR	Username Password	
		WPA-PSK	Passphrase Pre-Shared Key	
	Reg. Domain: *none	01-02		
			[802.11 Config]	
			a	802.11a 5.150-5.250 5.250-5.350 DFS 5.470-5.725 DFS 5.275-5.825 DFS

Table 3 Admin menu options

Admin menu option	2nd level	3rd level	4th level	5th level
			*b and b/g mixed g only	[Transmit Power] *Maximum 5 mW <7dBm> 10 mW <10dBm> 20 mW <20dBm> 40 mW <40dBm> 50 mW <17dBm> 100 mW <20dbm>
Diagnostics	Run Site Survey			
	Diagnostics Mode [Disable/Enable]			
	Syslog Mode	*Disabled Errors Events Full		
	Error Handling Mode Halt on Error Restart on Error			
Restore defaults				

Language

Choose a language from those on the list.

Telephony Protocol

Use Telephony Protocol to select the VoIP protocol that your site is licensed to download and run. The UNIStim Protocol to use for the WLAN Handsets 6120/6140 is 032. Any other protocol causes the handsets to malfunction.

Push-to-talk

All 24 Push-to-talk channels are allowed by default. The Push-to-talk menu provides the following options:

- Allowed Channels- Toggle the allowed status of any allowed channel by scrolling to the channel to be disallowed and pressing Enter. Allowed channels are displayed with an asterisk (*) in the left column. Only those channels allowed in the Admin menu appear on the Config menu, where they can be subscribed to by the user.
- Named Channels- You can name allowed channels. The name appears instead of the channel number when channel information appears on the handset. The name appears on the local handset only; it does not appear on target handsets.
- Priority Channel- You can configure the priority channel, also referred to as channel 25, which makes it available to all Push-to-talk handsets. When you make a Push-to-talk broadcast on the priority channel, it overrides any active Push-to-talk transmission on all other channels. You can name the priority channel.

Time zone

Worldwide time zone options are available. Select your time zone from the list. Greenwich Mean Time (GMW) is the default.

Daylight Saving

You can adjust the handset for daylight savings time. The following are the Daylight Savings menu options:

- DST No Adjust (Default)
- DST Auto (USA)
- DST Auto (AUS)
- DST Auto (EURO)

Protected Spd Dial

The protected speed-dial number appears as the first item on the speed-dial list and is specially marked with an asterisk (*) as the first character in its name. It is usually programmed to a number to be called in emergency situations. If the Call Server offers directory services, Redial, Speed-dial, and Phonebook features in the handset are disabled, including the protected speed-dial number feature. Any entry here is overridden by the Call Server.

Password [Disable/Enable] and Change Password

The password option controls access to the administrative functions in the Admin menu of the wireless handset. Configure the password in each handset for which controlled access is desired. By default, the password is disabled when the handset is shipped.

To modify the password requirement, enter the default or previously configured password to verify the change. The Password option operates as a toggle between Enabled and Disabled. Press Enter to change the password protection state. Change Password appears only if the password is enabled.

Attention: Record the wireless handset Admin password and store it in a safe place. Do not lose the Admin password! If the Admin password is lost or forgotten, you can be required to return the handset to Nortel to have the password reset.

Set Terminal Type

The terminal type configures the WLAN Handsets 6120/6140 for the type of PBX in use. The BCM system requires the 3rd Party setting. The current Terminal Type is shown on the information line. Press Enter to toggle to the alternate setting.

Startup Keylock

Startup Keylock deactivates the keypad during startup so that initialization cannot be interrupted. This is a toggle option; the info line displays whether the option is enabled or disabled. Select No Startup Keylock to disable and select Startup Keylock On to enable.

Speakerphone

You can disable the speakerphone when quiet handset operation is required. Disabling the speakerphone removes the speakerphone soft key from the active mode display. The current speakerphone setting is shown on the information line. Press Enter to toggle to the alternate setting.

OAI [Disable/Enable]

With the Nortel Open Application Interface (OAI), the wireless handsets can connect with the optional WLAN Application Gateway 2246. This device allows third-party computer applications to display alphanumeric messages on the wireless handset display and take input from the wireless handset keypad.

If a WLAN Application Gateway 2246 is installed in the system, OAI can be optionally enabled in the wireless handset. Select whether the wireless handset can attempt to connect to the WLAN Application Gateway 2246 by pressing Enter to toggle to the alternate setting.

If OAI is enabled, and a WLAN Application Gateway 2246 IP address is available to the wireless handset (either through DHCP or Static IP configuration), the wireless handset communicates with the WLAN Application Gateway 2246 at power-on, and then periodically during the time the wireless handset is powered on.

If a WLAN Application Gateway 2246 is not installed at the site, disable the OAI feature to preserve network bandwidth and battery life.

IP addresses

The WLAN IP 6120 handset can operate in three modes: DHCP enabled, either Full DHCP or Partial DHCP, and Static IP. Select the mode for operation from the IP Address menu:

- Use DHCP—uses Dynamic Host Configuration Protocol to assign an IP address each time the handset is turned on. If DHCP is enabled, the handset also receives all other IP address configurations from the DHCP server.
  — Full DHCP—enables DHCP for all IP addresses.
  — Partial DHCP—enables static IP address configuration for Server 1, Server 1 Port, Server 2, and Server 2 Port. All other IP addresses are assigned by DHCP.
  Server 1 (2) IP address—the IP addresses of the Nortel device. If using Static IP configuration, this is the IP address of the device. If DHCP is used, the handset tries to obtain the IP address and port information by using the following DHCP options: 43, 128, 144, 157, 191, and 251.

  Server 1 (2) Port—the port number used by Nortel device to communicate with IP telephones. If using Static IP configuration consult your Nortel documentation for port numbers. If DHCP is used, the handset tries to obtain the IP address and port information by using the following DHCP options: 43, 128, 144, 157, 191, and 251.
- Static IP—allows you to manually set a fixed IP address. If selected, the handset prompts for the IP Addresses of each configurable network component. When entering addresses, enter the digits only, including leading zeroes. No periods are required.

  Regardless of the mode in which the handset is operating, you must configure the following components:
- Phone IP—the IP address of the handset. This is automatically assigned if DHCP is used. If using Static IP configuration, you must obtain a unique IP address for each handset from your network administrator.
- Default Gateway and Subnet Mask—used to identify subnets, when using a complex network that includes routers. Both of these must be configured either with an IP address under Static IP (not configured to 000.000.000.000 or 255.255.255.255) or with DHCP for the handset to contact any network components on a different subnet. If configured on the DHCP server, use option 3 for the Default Gateway and option 1 for the Subnet Mask. Contact your network administrator for the proper settings for your network.

  Attention: A WLAN Handset 6120/6140 cannot roam across subnets because it cannot change its IP address while it is operational. Ensure that all your access points are attached to the same subnet for proper operation. If DHCP is enabled, you can change the subnet of the handset by powering off the handset, and then powering it back on when it is within range of access points on the new subnet.
- TFTP Server IP—the IP address of a TFTP server on your network that holds firmware images for updating the handsets. If this feature is configured (not configured to 0.0.0.0 or 255.255.255.255), either by using Static IP configuration or by using DHCP option 66 (TFTP Server), or the Boot server/next server (siaddr) field, the handset checks for newer firmware each time it is powered on or comes back into range of your network. This check takes only a second and ensures that all handsets in your network are kept up-to-date with the same version of firmware.
- Syslog Server IP—the IP address of the Syslog Server. See the Diagnostics section for more information.
- Time Server IP—the IP address of the time server.
- SVP IP address—the IP address of the SVP Server. If using Static IP configuration, this is simply the IP address of the SVP Server. To have a permanent IP address, the SVP Server must be statically configured. If DHCP is used, the handset tries the following, in this order:
  — DHCP option 151
  — a DNS lookup of SLNKSVP2 if the DHCP options 6 (DNS Server) and 15 (Domain Name) are configured.
- Call Server Info—the IP addresses of the BCM. When setting static IP addresses, the IP addresses and Port addresses must be configured for Svr1 and Svr 2. For more information, see Partial DHCP.
- OAI Server IP—the IP address of the NetLink (NL) OAI Gateway (if applicable). If using Static IP configuration, this is simply the IP address of the NL OAI Gateway. If DHCP is being used, the handset tries the DHCP option 152.

SSID

Enter the SSID.

Security

The following are the security options:

Attention: For Wired Equivalent Privacy (WEP), WiFi Protected Access using PSK Preshared Key (WPA-PSK), and WPA2-PSK configure each of the following options to match exactly the settings in your APs. Encryption codes appear as they are entered. For security reasons, codes do not appear on the display when a user returns to the Admin menu, Encryption options.

- *NONE—disables any 802.11 encryption or security authentication mechanisms.
- WEP—a wireless encryption protocol that encrypts data frames on the wireless medium, allowing for greater security in the wireless network. If WEP is used, you must configure each handset to correspond with the encryption protocol configured in the access points. Select the entries from the options below to enable the handset to acquire the system.
  — Authentication—Select either Open System or Shared Key.
  — WEP Enable/Disable—Select either Enable WEP or Disable WEP.
  — Key Information—Configure the following:
  – Default Key—Enter the key # specified for use by the handsets. This is 1 through 4.
  – Key Length—Select either 40-bit or 128-bit depending on the key length specified for use at this location.
  – Key 1-4—Scroll to the key option that corresponds to the Default Key that you entered above. Enter the encryption key as a sequence of hexadecimal characters. (Use the 2 and 3 keys to access hexadecimal digits A-F.)
  — Rotation Secret—This is used for proprietary WEP key rotation. To determine whether this feature is supported in your system, see your custom document.
- WPA2-PSK—The security features of WPA2-PSK are available and can be used if supported by the access points in the facility. Select one of the following:
  — Passphrase—enter a passphrase between 8 and 63 characters in length.
  — Direct Entry—enter the 256-bit key code.

  Attention: For information about whether WPA2-PSK is recommended for an AP, consult the Configuration Note for the installed APs. Configure the recommended version on the AP and select the corresponding option on the Admin menu.
- Cisco FSR—To provide the highest level of security without compromising voice quality on Cisco Aironet WLAN APs, the Fast Secure Roaming (FSR) mechanism is implemented. FSR is designed to minimize call interruptions for wireless handset users as they roam throughout a facility. Existing Aironet 350, 1100, and 1200 APs can require a firmware upgrade to support FSR. Cisco FSR requires advanced configuration of the Cisco access points at your site. See the Cisco representative for detailed documentation about configuring your access points and other required security services on your wired network. To configure Cisco FSR in the wireless handset, you must enter a Radius Server username and password into each handset.
  — Username—Enter a username that matches an entry on your Radius server. Usernames are alphanumeric strings, and can be entered using the alphanumeric string entry technique.
  — Password—Enter the password that corresponds to this Username.
- WPA-PSK—The security features of WPA-PSK are available and can be used if supported by the access points in the facility. Select one of the following:
  — Passphrase—enter a passphrase between 8 and 63 characters in length.
  – 8-character passphrase—weak
  – 20-character passphrase—minimum
  – 20 to 30-character passphrase—recommended
  – 63-character passphrase—very strong
  — Direct Entry—enter the 256-bit key code.

Regulatory domain, 802.11 configuration, and transmit power

Regulatory domain, 802.11 configuration, and transmit power are interdependent settings. After the domain and 802.11 type are established, you can configure the transmit power.

Attention: The 802.11 options and the transmit power options, must be configured to match the corresponding settings used by the APs in the facility.

The FCC requirements dictate that the menu for changing the domain be available by password, which in this case is the LINE key. To configure the domain, press LINE and then select the domain:

- 01 North America
- 02 Europe

After you establish the regulatory domain, the 802.11 Config options appear on the display. You can choose only one option; 802.11 (b and b/g mixed) is the default. If 802.11 (a) is selected, another menu opens so that you can select the 802.11a transmission frequency. Only those ranges that are allowed in the selected domain appear. You can select multiple ranges. The selected mode and ranges are marked with an asterisk (*). Press the Done soft key after you finish specifying the 802.11 mode.

After you press the Done soft key, the Transmit Power menu opens. Only those power levels that apply to the domain and 802.11 mode are listed. You can select only one level. The default varies with the domain and 802.11 mode. The selected level is marked with an asterisk (*).

Run Site Survey

Select this option to activate the Site Survey mode. Site Survey runs immediately upon selecting this option.

Diagnostics Mode

Diagnostics Mode evaluates the overall quality of the link between the handsets, the AP, and the infrastructure equipment (call server, WLAN IP Telephony Manager 2245, and gateways). Diagnostics Mode can be used when the handset is active. When Diagnostics Mode is activated in the Admin menu, the handset enters the diagnostic state. The handset can display diagnostics any time it is on a call.

Syslog Mode

Configure Syslog Mode to one of the following options:

- Disabled—turns syslog off
- Errors—logs events that are considered errors
- Events—logs all errors, plus some events of interest
- Full—logs all errors and all other events of interest

Table 4 Syslog message levels

Message Type	Events	Errors	Full
Failed handoff	Yes	Yes	Yes
Successful handoff	No	Yes	Yes
Security error	Yes	Yes	Yes
Call start or end	No	Yes	Yes
Audio error threshold exceeded	Yes	Yes	Yes
Audio stats	No	No	Yes (every 5 s)
Radio error threshold exceeded	Yes	Yes	Yes
Radio stats	No	No	Yes (every 5 s)

Error Handling Mode

The Halt on Error option causes the handset to stop operating if an error message is received. Unless the error is a fatal one, normal operation can be resumed by power cycling the handset. Press START or remove and replace the Battery Pack. The Restart On Error option causes the handset to make every effort to reboot quietly and quickly to standby mode. In either scenario, a call in progress is lost. Error detail can be captured by the Syslog Server and can also be available for downloading with the Handset Administration Tool.

Restore Defaults

The Restore Defaults option restores all user and administrative parameters, except Telephony Protocol, to the factory default configurations.

WLAN Handsets 6120/6140 Handset Administration Tool

The Handset Administration Tool for the WLAN Handsets 6120/6140 is a software utility that you install on a PC that has a USB port that can be cabled to the USB port of the Dual Charger. Configuration options include:

- configuring all options on the Admin Menu
- configuring all options on the Config Menu
- assisting with troubleshooting by recording error information
- upgrading the handset firmware

To install the Handset Administration Tool, install the software utility as described in the procedure "Installing the Handset Administration Tool".

Personal computer and hardware requirements

- Personal computer (PC) running Windows 2000 or Windows XP with a USB port
- Dual Charger for the WLAN Handsets 6120/6140
- Power supply for the appropriate country or region
- Dual Slot Handset Charger USB Cable or comparable cable (with 5-pin mini-B connector)

Attention: USB cables vary in the ability to make a proper connection to the Dual Charger USB port. Use the USB cable recommended by Nortel to ensure compatibility.

Installing the Handset Administration tool

Attention: You cannot uninstall the Handset Administration Tool because it runs from its current location and stores its settings locally. It does not modify your system or registry.

1. On the PC, create a folder for WLAN Handsets 6120/6140 configuration.
2. Follow the instructions http://www.nortel.com/downloadingcontent to download the following file to your local terminal:
   • Product Category: Wireless LAN
   • Product Name: WLAN Handset 6120 or WLAN Handset 6140
   • Content Type: Supporting Software

   Obtain the precise Release, Status, and Title of the file from your next level of support.
3. Download the Handset Administration Tool software .zip file to the folder you created in Step 1.
4. Extract the individual files from the .zip file to the same folder.
5. Double-click the **HandsetAdminXxyy_yy_yy_yy.exe** file to run the utility.
6. Read and accept the **SpectraLink Software License Agreement**.

Use the Handset Administration Tool

The Handset Administration Tool has two separate functional areas: the Administration Console and the Handset Settings Editor.

With the Administration Console, you can connect to the handset, configure and change the password, retrieve error messages, update handset firmware, and update the Handset Administration Tool software.

With the Handset Settings Editor, you can configure handsets and create, save and copy Admin menu options.

The Handset Administration Tool uses indicators to alert you to the status of the action being performed:

- Green—the adjacent label is true and this state is desirable or required.
- Yellow—the adjacent label is true and this state requires caution or attention. For example, a yellow New folder indicator cautions that the file path is to be created. A yellow File exists indicator cautions that the file is to be overwritten.
- Red—the adjacent label is true and this state is undesirable or is accompanied by an error. A message, on the prompt line or in a dialog box, describes the nature of the error.
- Gray—the adjacent label is not true, for example, the handset is not connected.
- Blinking—file status indicators blink yellow when the file status is being queried but is not yet known (for example: when attempting to access slow drives or unresponsive network devices). File status indicators blink red when the path is invalid (mistyped). The Handset indicator blinks when the handset password must be entered.

A prompt line at the bottom of the window provides information about what action to take or the status of the utility.

Connecting to the WLAN Handsets 6120/6140

1. In the Handset Administration Tool, select the **Connect** tab.
2. Power off the handset and insert it into the Dual Charger.
3. Type the password.
   You must enter a password the first time you insert the handset.
   The default password is 123456.

   Attention: If you check the Remember password box, the password is retained as the default password for all handsets. Unique passwords for each handset are not remembered.
4. Click **Submit**.
   After a connection is established between the program and the handset, the Handset connected indicator turns green and *Connected* appears on the prompt line. The handset is now ready for configuration.

Password configuration

Use the Handset Administration Tool to enable or disable the password requirement, or to change a current password. Connect to the handset and select the Password tab. If the Enable password check box is unchecked, no password is required to access Admin Settings in the handset Standby menu.

Changing the password

1. In the Handset Administration Tool, select the **Password** tab.
2. Type the current password.
3. Type the new password.
4. Retype the new password.
5. Click **Change password**.

Error information

Use the Error info tab of the Handset Administration Tool to assist the customer service team in troubleshooting handset errors. Use this utility, as directed by customer service, to save any errors as a file that you can send to customer service for handling.

Use the Browse button to establish the path and then enter a file name. Future save operations point to this same location as the default; the same file can be overwritten if desired. A list box displays the most recently used file names. The File time window displays the modification timestamp of the file in the Save as window.

To save a file, click the Get file button. The file is copied from the handset to the location. The Read/Write indicators indicate each action as it occurs. A progress indicator above the prompt line shows file transfer progress.

Firmware updates

Select the Firmware tab and update the firmware in the handset by copying it from a location on your computer to the handset memory.

Each file must be individually downloaded into the handset. This is not an efficient method of updating any quantity of handsets, but it works for testing new code and in extremely small installations. If there is a TFTP server that is broadcasting older code, the handsets continue to download code over the air and revert to the older code after you power cycle them.

Updating the WLAN Handsets 6120/6140 firmware

1. Follow the instructions http://www.nortel.com/downloadingcontent to download the following file to your local terminal:
   • Product Category: Wireless LAN
   • Product Name: WLAN Handset 6120 or WLAN Handset 6140
   • Content Type: Releases

   Obtain the precise Release, Status, and Title of the file from your next level of support.
2. Create a new folder for the firmware update.
3. From the .zip file, extract the bin files to the folder that you created in Step 2.
4. Use the Handset Administration Tool to connect to the handset.
5. In the Handset Administration Tool, select the **Firmware** tab.
6. Click **Browse** to locate and select the firmware files.
   A list box displays the most recently used filenames. The File time indicator displays the modification timestamp of the selected file. The file version and handset version indicators display the version of the selected file and the version of the handset firmware for comparison.

7 Verify that the correct firmware update file is selected and click **Update**.
The file is copied from the location to the handset. The Read/Write indicators indicate each action as it occurs. During a firmware update, you can open other tabs. The handset indicators on the tabs indicate the status of the update.

8 Repeat Step 6 and Step 7 for each of the.bin files.

If an Error indication occurs, ensure that the handset is properly seated and that the USB cable is in good condition and connected securely, and then retry the update. Contact Customer Service if an error persists.

Version

To view the serial number of the handset and the current firmware version, select the Version tab.

To update the Handset Administration Tool, click the Update Application button.

Admin menu settings

Select the Settings tab in the Handset Administration Tool to configure required and optional settings in the Admin Menu. You can also assign end user Config Menu options such as user name. Which options are available depends on the firmware used by the handsets. For specific configuration requirements, see the Configuration and Administration document that pertains to the protocol used by the system at your site.

The handset serial number and firmware version appear on the Settings tab. To display the version of the Handset Administration Tool, click Show Tool Version.

To enter and modify menu settings, click Show Settings Editor. After the Handset Settings Editor appears, to close the Settings tab window, click Close this window. To reopen the Settings tab window from the Handset Settings Editor, select View>Admin functions.

Handset Settings Editor toolbar

With the Handset Settings Editor toolbar you can name, open, and save configuration files. You can also download and upload configuration settings to and from the handset in the charger.

Figure 2 Handset Settings Editor toolbar

Use the three file name windows to open and save settings by System,Group or User type as separate files. To assign a file name, type it into the field and click Save. By default, the files are saved in a new folder named ConfigData in the folder where the program is stored. The new folder is created automatically the first time a file is saved. To open an existing file, click Open and browse to the file. Use the File menu to customize the file structure.

The file indicators beside the Save buttons use four colors to indicate the status of the file displayed in the window:

- Red—file does not exist. The file name in the window is not yet created.
- Yellow—file not loaded. The file name in the window exists in the ConfigData folder but is not loaded into the Editable settings.
- Green—unsaved edits. After you make changes in the Editable settings fields, the green indicator indicates the changes are not saved. Gray—file up-to-date. The settings are saved.

There are two columns of configuration options. The Editable settings column shows settings that you can save as files. The Handset settings column shows settings that you can copy from or copy to the handset in the cradle. By using the Copy settings arrows and boxes, you can copy settings to the handset column and then write the settings to the handset in the charger.

You can also copy the configuration from a handset to the Editable settings area and then edit or save it. Use the Sys, Grp, and Usr check boxes to specify and copy only the settings that you require.

Use the Read Handset and Write Handset buttons to initiate the transfer of configuration data from or to the handset in the charger.

Four indicators (labeled Handset, Read, Write, and Error) indicate the status of the configuration transfer.

Create a configuration plan

When you first create a configuration plan, you enter information into the Editable settings fields, indicate which of the three categories each option belongs to, and save as System, Group, or User files.

Attention: Do not create a plan that saves an option in two different categories. Be sure to establish option categories that do not overlap. For example, Speakerphone and Push-to-talk settings are typically tagged as Grp options and saved in Group files.

After you establish which options are categorized as System, Group, or User, enter the configuration information into the Editable settings fields. Begin with the System options and enter all system-level field values. Click the Sys category button on the left side of the window for each option. To save these settings as a System file, enter the file name in the System file name field and click Save.

To create each Group plan, enter the values in the fields designated as Group types. Click the Grp category button on the left side of the window for each option. Save each plan under a different name in the Group file name field.

Create one basic User file for default (or desired) values for each User field. Click the Usr category button on the left side of the window for each option.

Attention: Although you need not save user settings for each handset, it is useful to do so. For example, you can save a user's ring preferences from a handset being replaced so that the new handset can be configured the same way. If you decide to save the configuration for each handset, it is easiest to do this during the configuration process.

Configuration planning worksheet

Use a worksheet similar to the one shown to design your configuration plan.

Figure 3 Sample planning worksheet

Sys	Grp	Usr	Label	Editable Setting

Download or upload a configuration plan

After you establish your configuration plans, the settings can easily be downloaded to the handsets.

Downloading a configuration plan to a WLAN Handsets 6120/6140

1. Use the Handset Settings Editor toolbar to open the System, Group, and User plans for this handset.
2. Enter information unique to the handset, for example, the Extension and User Name fields.The Extension field has a Next button that is useful for configuring a quantity of handsets.
3. Copy the settings to the Handset settings fields.
4. Click **Write Handset** to begin the download.
   After the Handset indicator turns off, the download is finished and you can remove the handset from the charger.
5. (Optional) To save the settings unique to this handset, ensure that the correct extension number or other file name exists in the User file name field and then click Save.You can also load files or edit settings for the next handset—Step 1 and Step 2 during the download.
6. Remove the handset from the charger.

Uploading a configuration plan to a WLAN Handsets 6120/6140

1. On the Handset Settings Editor toolbar, click **Read Handset**.
   After the Handset indicator turns off, the upload is complete and the handset settings appear in the Handset settings fields.
2. (Optional) Copy settings to **Editable settings** fields.
3. (Optional) Create configuration plans.
   OR
   Save the settings by user or extension.

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Copyright 2008
Document number: NN40050-400
01.01
April 2008